



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/574,634

03/22/2007

Joe O'Connor

28125-5

4129

21130 7590 02/02/2010  
BENESCH, FRIEDLANDER, COPLAN & ARONOFF LLP  
ATTN: IP DEPARTMENT DOCKET CLERK  
200 PUBLIC SQUARE  
SUITE 2300  
CLEVELAND, OH 44114-2378

EXAMINER

HAGEMAN, MARK

ART UNIT

PAPER NUMBER

3653

NOTIFICATION DATE

DELIVERY MODE

02/02/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent@beneschlaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,634	<b>Applicant(s)</b> O'CONNOR, JOE	
	<b>Examiner</b> Mark Hageman	<b>Art Unit</b> 3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4-3-2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is indefinite as it implies that the second member is moved or movable which is the not the case. The disclosure supports moving the first members relative to the second member but not motion of the second member (except for rotation).

Claim 8 is indefinite as it is at odds with claim 1 from which it depends. Claim 1 requires two first members and one second member while claim 8 discusses "a plurality of pairs" which implies one first member for each second member. As understood this claim is meant to cover the use combination of multiple systems in tandem (as shown in figure 5) but this meaning is not clear from the claim. To make sense relative to claim 1 each of the plurality of pairs would require two first members for each second member.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7.270.025 to Niglov. Niglov discloses a variable vibration mechanism comprising: a first member (moveable eccentric weight assembly 10, 5 etc.) arranged telescopically with a second member (8, 9), wherein said first member each have a first eccentric weight (10) and said second member has a second eccentric weight (9), wherein said first member and said second member are adapted to be engaged with one another, such that the rotational displacement between said first eccentric weights and said second eccentric weight may be varied by varying the longitudinal displacement between said first members and second member (c4 lines 3+). Niglov does not disclose a second first member. It would have been obvious to one of ordinary skill in the art to include a second first member though as the duplication of parts has been deemed to have "no patentable significance unless a new and unexpected result is produced, see MPEP 2144.04 VI B. Also Examiner notes that it is well known to use multiple eccentric weights on the shaft and that the duplication of the system (along a single shaft) would provide the desired variation in vibration while preventing the need for larger eccentric weights thus providing a lower profile arrangement and spreading the eccentric masses out over the length of the shaft.

Re claim 2 wherein one of said first members and second member are adapted to receive the other of said first members and second member (figure 1). Examiner contends that any engagement by the first and second members will anticipate this claim as the specific spatial relationship is not set forth.

Re claim 3 wherein said first members and second member are threadably engaged with one another (figure 4).

Re claim 4 wherein said second member has two oppositely cut threaded portions to engage said first members (15).

Re claim 5 wherein said first members and second member are cylindrical (shafts holding eccentric weights 9 and 10).

Re claim 6 further comprising means for telescopically displacing said first and second members (figure 4 and c4 lines 15+).

Re claim 8 wherein said vibrator mechanism comprises a plurality of pairs of first and second members, wherein each pair of first and second members are arranged telescopically with one another. Examiner notes that the use of a plurality of parallel shafts all containing eccentric weights is well known in the field of vibration inducing apparatuses and the duplication of repetition of multiple systems (working in tandem) would be obvious to one of ordinary skill in the art.

Re claims 9 and 10 examiner contends that the only change is to the preamble which is reciting an intended use of the previously claimed mechanism but fails to

Art Unit: 3653

provide any further structural limitation to the claims. Therefore the preamble does not constitute a claim limitation in this case and fails to distinguish the claims from the prior art, see MPEP 2111.02 II. Furthermore examiner notes that the substitution of a known element (in this case the vibration system) for another known element for the same predictable result of inducing variable vibration would have been obvious to one of ordinary skill in the art.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niglov as applied to claims 1-6 and 8-10 above, and further in view of US 4,481,835 to Storm. Niglov discloses all the claims limitations except the means for telescopically displacing said first and second members is a hydraulic ram. Storm discloses a similar variable vibration arrangement including a axial motion that results in a change of rotation position of eccentric weights (fig 2-3 and c1 lines 46+) including the means for telescopically displacing said first and second members is a hydraulic ram (c1 lines 52+) for the predictable result of providing axial movement and coordinating parts.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Niglov to include the hydraulic ram actuation, as taught by Storm, as the substitution of one known linear actuation system (the hydraulic ram) for another system (the screw arrangement) for the predictable result of providing axial movement and coordinating parts would have been obvious to one of ordinary skill in the art.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Numerous references are cited which show axial movement devices that are used to vary the rotational position of eccentric masses and thus change the vibration profile of vibrating mechanisms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick Mackey/  
Supervisory Patent Examiner, Art  
Unit 3653

Application/Control Number: 10/574,634  
Art Unit: 3653

Page 7

MCH